DOCUMENT RESUME

ED 023 135 CG 003 124

By-Vriend, John

Vocational Maturity Ratings of Inner-City High School Seniors.

American Psychological Association, Washington, D.C.
Pub Date Sep 68
Note-20p.; Speech presented at the American Psychological Association Convention, San Francisco, August 30-September 3, 1968.
EDRS Price MF-$0.25 HC-$1.10
Descriptors-*High School Students, *Inner City, *Maturation, *Measurement Instruments, Measurement Techniques, Program Effectiveness, *Vocational Development

The present investigation attempted to determine particular vocationally-related behaviors common to second semester seniors in two inner-city high schools, to gather data about these behaviors, to analyze and evaluate these data, and to draw conclusions about the relative vocational maturity of individuals in the study population. Data were gathered in six vocational maturity component areas. School achievement, as measured by grade point averages at two grade levels, emerged as the best predictor of a rating of vocational maturity. More promising for future vocational maturity researchers is the finding that the vocational planning and job knowledge sections of the research instrument emerged as vocational maturity rating predictors almost as powerful as school achievement. This finding provides a basis for direction in the development of other vocational maturity rating instruments. The finding indicates that an assessment of students' vocational-educational plans or lack thereof, and steps taken toward plan implementation, together with an assessment of general job knowledge, would provide a vocational guidance worker with a relatively valid rating of an individual's vocational maturity. (AUTHOR)

OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

# VOCATIONAL MATURITY RATINGS OF INNER-CITY HIGH SCHOOL SENIORS

John Vriend

Wayne State University

The concept of vocational maturity emanates from vocational development theory (Crites, 1961, 1964; Super, 1957, 1963). That certain vocationally related behaviors normally occur within each of an ordered sequence of life stages is an important vocational development proposition (Hall, 1963; Super, 1960). The vocational maturity or immaturity of an individual within a given life stage is thus a relative determination made by comparing his vocationally related behavior with that of other individuals who are dealing with the same developmental tasks of that life stage.

The variables associated with the vocational maturity of high school students are divisible into two groups: 1.) those over which the individual has no control, such as parental educational level, and 2.) those which are modifiable, such as school achievement or level of aspiration. An educational and guidance activity program which focuses upon vocational development would not affect the former. The present study was designed to determine which of several of the latter group of variables have been modified as an outcome of such a program.

Determining components of vocational maturity at a given life stage is essentially a rational process based upon available research data and suggestions made in the literature.

ED023135
CG 003 124

The present investigator has been guided by Crites (1961, 1964), Super (1960), Tiedeman (1961), and others in selecting vocational maturity components upon which to build an instrument for measuring the vocational maturity of second semester seniors in two Detroit, Michigan, inner-city high schools.

The Developmental Career Guidance Project (DCGP) is an on-going program of structured career related activities to which the seniors in the experimental school (School E) had been exposed for two years at the time of the present study (Leonard, 1966, 1968). Based on vocational development principles, it is both a demonstration and action research program designed to reach all members of the student body. Prior to the operational establishment of the DCGP in the Fall Term of 1965, the control school (School C) was chosen to match School E based on various Census tract data (1960), percentage of overageness in school grade, scholastic achievement, scholastic aptitude, and racial composition (Leonard, 1966).

## DESIGN

The postest-only control group design was basic to this study (Campbell & Stanley, 1963). The study sought to determine mean vocational maturity rating (VMR) differences among school, sex, and curricular groups. A review of the literature on vocational maturity (VM) led to the conclusion that the following components are VM indicators at the life stage in which high school seniors find themselves: (a) school achievement as determined by report card grades; (b) agreement between levels of vocational aspiration and expectation; (c) vocational

and educational planning; (d) participation in activities in and out of school; (e) vocationally related self knowledge; and (f) general job knowledge. An instrument, the Vocational-Educational Survey for High School Seniors (V-ES), was developed to provide a measure of each of these VM components. The sum of the six subscores yielded by these measures comprised an individual's VMR.

It was hypothesized that VMR's for the experimental group would be higher than those for the control group when school, curricular, and sex groups were compared. It was further hypothesized that in the combined schools' population, college preparatory seniors would have higher VMR's than those in any other curriculum, that seniors in the commercial curriculum would have higher VMR's than those in any other curriculum except college preparatory, and that girls in the combined schools' population would have higher VMR's than boys.

## METHOD

### Instrument

The VMR is a composite score derived by quantifying and summating assessments of the six VM components. Five of the six component measures are given approximately equal weight in the V-ES and one, school achievement, is given approximately double weight (Peak, 1953) based on the rationale that school grades represent a record of actual performance at the main "work" of an individual in his pre-vocational life. The school achievement score was derived by assigning values to grade point averages taken directly from school records at grades 10B

(first semester, sophomore year) and 12B (first semester, senior year), and to plus or minus differences between the two averages.

The V-ES requires the respondent to declare desired and expected occupational categories for himself in the projected future. These responses are assigned to one of seven socio-economic levels using Hamburger's (1957) Revised Occupational Scale. The resulting levels for both categories are matched and then scored according to nearness of agreement, the wider the gap between levels, the lower the agreement score.

The vocational planning section of the V-ES is divided into two parts having parallel construction which specify behavioral steps taken toward broad post high school goals, either full time work or full time further schooling. The activities section of the instrument elicits information in the categories of school activities, out-of-school activities, and paid work experience. The self-knowledge section is comprised of 50 items; the respondent expresses how well he knows himself in the dimension specified by each item by selecting one of four levels of confidence. The job knowledge section is a multiple choice test containing twenty items covering a range of general concepts about occupations and the world of work.[1]

Pilot Study

A pilot study was conducted to test the validity, reliability, and usability of the V-ES, as well as to test the efficacy of the study procedures and design. The instrument was administered to seniors at an inner-city high school comparable to, but

[1]A copy of the Vocational-Educational Survey for High School Seniors and scoring instructions are included in Vriend (1968b).

other than, the experimental and control schools. Vocationally mature (N = 23) and vocationally immature (N = 25) groups were established through counselor nomination procedures according to agreed upon criteria. The V-ES was assumed to be valid if it satisfactorily discriminated between the two groups.

It was established that a significant difference between the means of the VMR's of the two groups existed at the .001 level ($t = 6.51$, $\underline{df} = 46$). Correlations between subscores of the V-ES and the total score (N = 48) resulted in significant (.01 level) coefficients of correlation (range: .41 to .85), thus validating the contribution of each subtest to the total VMR. Reliability coefficients for each of the subscores (range: .54 to .98) were calculated by use of the Kuder-Richardson formula (Johnson, 1949) and were considered high when compared to reliability coefficient ranges of subscores of four commercial inventories employing the same formula to determine reliability. The V-ES was found to be administrable within a forty-minute scheduled class period of the school day; vocabulary and degree of reading difficulty presented no handicaps to respondents. Analyses of the administrative and scoring procedures used in the pilot study, and of the pilot study data, revealed that the validity, reliability, and usability of the V-ES were sufficiently high to warrant its use in the investigation.

Subjects

The study included only second semester seniors (12A's) who had been enrolled in the combined schools since the inception of the DCGP in School E. Both schools rank in the lowest

quintile of Detroit subcommunities in social ratings of such characteristics as: (a) families with annual incomes under $3,000; (b) number of unemployed persons; (c) Aid to Dependent Children families; (d) disrupted marriages; (e) children not living with both parents; and (f) deteriorating and dilapidated housing (United Community Services, 1962). Approximately 93% of the population had lived in Detroit four years or more (with 66% having been born there), 52% lived in a house with six or more people in it (Vriend, 1968a), and over 75% of the seniors in School C and 80% of those in School E were non-white (Vriend, 1968b).

The distribution of the study population according to school, sex, and curricular membership is shown in Table 1.

TABLE 1

DISTRIBUTION OF STUDY POPULATION ACCORDING TO SCHOOL, SEX, AND CURRICULUM

| School and Curriculum | Boys | Girls | Total |
|---|---|---|---|
| SCHOOL E (N=168) | | | |
| College Preparatory | 35 | 18 | 53 |
| Commercial | 17 | 57 | 74 |
| Other | 34 | 7 | 41 |
| Totals | 86 | 82 | 168 |
| SCHOOL C (N=112) | | | |
| College Preparatory | 24 | 7 | 31 |
| Commercial | 8 | 28 | 36 |
| Other | 32 | 13 | 45 |
| Schools Combined (N=280) | | | |
| College Preparatory | 59 | 25 | 84 |
| Commercial | 25 | 85 | 110 |
| Other | 66 | 20 | 86 |
| Totals | 150 | 130 | 280 |

The population included only those 12A students in the selected schools who were in continuous enrollment since the beginning of the 10A semester. 12A's were chosen as the study population because students at this grade level in School E had had the longest period of exposure to the program of structured career related activities, and the real life necessity for making post high school educational and vocational plans was more incumbent upon them than their peers in earlier grades.

Administration

The investigator administered the V-ES to class-size groups in the months of November-December, 1967. Each booklet was checked for ambiguity of response (particularly important in the subsections of vocational planning and vocational aspiration and expectation), thoroughness of completion, and readability. GPA's for grades 10B and 12B were computed directly from official school records. Over 95% of the eligible 12A's in Schools E and C participated in the study.

Analyses

Judges were used in assigning vocational aspiration and expectation responses to hierachical levels according to the Revised Occupational Scale (Hamburger, 1957). The V-ES booklet was coded for simple transpositions of scores to cards by keypunch operators. All data were processed at the Wayne State University Computer Center. Analysis of variance was used to determine the significance of differences between comparable groups. Analysis of selected parts of the data required

the use of correlations methods and chi square tests as indicated.

## RESULTS

### Hypothesized Findings

The results relevant to the major hypotheses are presented in Table 2.

TABLE 2

ANALYSIS OF VARIANCE OF VOCATIONAL MATURITY RATING DIFFERENCES BETWEEN COMPARED GROUPS

| School | Sex | Curriculum | N | M | SD | df | F |
|---|---|---|---|---|---|---|---|
| E | Both | All 3 | 168 | 515.46 | 96.70 | | |
| C | Both | All 3 | 112 | 360.36 | 113.39 | 278 | 149.65*** |
| E | Both | Coll. Prep. | 53 | 566.45 | 101.96 | | |
| C | Both | Coll. Prep. | 31 | 450.90 | 106.00 | 82 | 23.91*** |
| E | Both | Commercial | 74 | 499.36 | 96.63 | | |
| C | Both | Commercial | 36 | 376.17 | 97.47 | 108 | 39.11*** |
| E | Both | Other | 41 | 478.59 | 56.27 | | |
| C | Both | Other | 45 | 287.36 | 76.94 | 84 | 170.22*** |
| E + C | Both | Coll. Prep. | 83 | 524.69 | 116.98 | | |
| E + C | Both | Commercial | 110 | 459.05 | 112.62 | 191 | 15.54*** |
| E + C | Both | Coll. Prep. | 83 | 524.69 | 116.98 | | |
| E + C | Both | Other | 87 | 380.07 | 117.61 | 168 | 64.56*** |
| E + C | Both | Commercial | 110 | 459.05 | 112.62 | | |
| E + C | Both | Other | 87 | 380.07 | 117.61 | 195 | 22.97*** |
| E + C | Girls | All 3 | 130 | 464.59 | 133.02 | | |
| E + C | Boys | All 3 | 150 | 444.75 | 123.62 | 278 | 1.67 |

***$p < .001$

The hypothesis that School E would show higher mean VMR's than School C was supported. Moreover, significantly higher mean subscores on every VM component measure (.001 level) were posted for School E (not shown in Table 2). Also supported were the

hypotheses that a comparison of like curricular groups in the two schools would result in higher mean VMR's for School E, that college preparatory seniors in the combined schools would show a higher mean VMR than seniors in any other curriculum, and that commercial students in the combined schools would show a higher mean VMR than students in any other curriculum except college preparatory. That girls in the combined schools would show a higher mean VMR than boys was not supported. It can be noted in Table 2 that School E seniors in a curriculum other than college preparatory or commercial obtained a higher VMR (478.59) than college preparatory students in School C (450.90). The largest spread between VMR means occurred when seniors in the "Other" curriculum in School E were compared to their counterparts in School C.

VMR Predictors

How well did the V-ES do its appointed task? Which of the six VM component measures best predicted the total V-ES score? To answer this question all VM subscores were correlated with the total score and each other using mean scores based on the total study population (N = 280). Table 3 presents a matrix of Pearson product-moment correlation coefficients for the total score and the six subscores.

TABLE 3

INTERCORRELATIONS OF V-ES TOTAL SCORE AND SIX SUBSCORES

| Scores | ACHSC | AGRSC | VPLSC | ACTSC | SKNSC | JKNSC | TOTSC |
|---|---|---|---|---|---|---|---|
| ACHSC | - | .20** | .40** | .18** | .16** | .40** | .82** |
| AGRSC | - | - | .33** | .17** | .10 | .18** | .45** |
| VPLSC | - | - | - | .51** | .43** | .47** | .74** |
| ACTSC | - | - | - | - | .30** | .28** | .53** |
| SKNSC | - | - | - | - | - | .41** | .50** |
| JKNSC | - | - | - | - | - | - | .64** |
| TOTSC | - | - | - | - | - | - | - |

Note.--Abbreviated: TOTSC = Total Score, or Vocational Maturity Rating; ACHSC = School Achievement Score; AGRSC = Agreement: Levels of Vocational Aspiration and Expectation Score; VPLSC = Vocational Planning Score; ACTSC = Activities, In and Out-of-School Score; SKNSC = Self-Knowledge Score; and JKNSC = Job Knowledge Score.

**$p < .01$, $df = 280$.

The achievement score correlates highest with the total score (.82). That this would happen is an expected result insomuch as it was doubly weighted in the design of the instrument. The ACHSC, however, is tediously arrived at. It is the only score in the V-ES which is not supplied by the respondent; an investigator must search official records and compute GPA's for two grade levels, assign a quantitative value to each, assign a value to the differences between them, and total these values to determine the resulting ACHSC. Furthermore, the ACHSC does not correlate most highly with the other VM submeasures. The VM submeasure scores

in vocational planning and job knowledge show a better record of correlation. To determine the relative predictive effectiveness of these VM submeasures of the V-ES, multiple correlation regression analyses were made. The results are summarized in Table 4.

TABLE 4

MULTIPLE CORRELATIONS OF SELECTED V-ES SUBSCORES WITH V-ES TOTAL SCORE (N = 280)

| Simple Correlations | | | Multiple Correlations |
|---|---|---|---|
| TOTSC-ACHSC | TOTSC-VPLSC | ACHSC-VPLSC | TOTSC-ACHSC-VPLSC |
| r = .82 | r = .74 | r = .40 | R = .94 |
| TOTSC-VPLSC | TOTSC-JKNSC | VPLSC-JKNSC | TOTSC-VPLSC-JKNSC |
| r = .74 | r = .64 | r = .47 | R = .81 |
| TOTSC-VPLSC | TOTSC-SKNSC | VPLSC-SKNSC | TOTSC-VPLSC-SKNSC |
| r = .74 | r = .50 | r = .43 | R = .77 |
| TOTSC-VPLSC | TOTSC-AGRSC | VPLSC-AGRSC | TOTSC-VPLSC-AGRSC |
| r = .74 | r = .45 | r = .33 | R = .77 |
| TOTSC-VPLSC | TOTSC-ACTSC | VPLSC-ACTSC | TOTSC-VPLSC-ACTSC |
| r = .74 | r = .53 | r = .51 | R = .76 |

Note.--Abbreviated: TOTSC = Total Score, or Vocational Maturity Rating; ACHSC = School Achievement Score; VPLSC = Vocational Planning Score; JKNSC = Job Knowledge Score; SKNSC = Self-Knowledge Score; AGRSC = Agreement: Levels of Vocational Aspiration and Expectation Score; ACTSC = Activities, In and Out-of School Score.

Table 4 shows only those analyses which emerged as the best predictors. With the ACHSC eliminated, a combination of the VPLSC and the JKNSC resulted in a multiple correlation coefficient of .81 when correlated with the TOTSC. Together they account for 66% of the variance ($R^2 = .81^2 = 66\%$), a substantial predictive

value (McNemar, 1962).

Vocational Aspirations and Expectations

Data analyses related to each subsection of the V-ES are presented in the full report of the study (Vriend, 1968b). Of pertinence is the finding that the experimental group had signifcantly higher vocational expectations than the controls, while differences in vocational aspiration were not significant. Vocational aspiration level distributions are summarized in Table 5, and vocational expectation level distributions in Table 6.

TABLE 5

LEVELS OF VOCATIONAL ASPIRATION OF STUDENTS IN SCHOOL E COMPARED WITH THOSE IN SCHOOL C: FREQUENCY DISTRIBUTIONS, PERCENTAGES, AND CHI SQUARE

| Aspiration Level | School E | | School C | | Schools Combined | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| 1 | 12 | 7.1 | 7 | 6.3 | 19 | 6.8 |
| 2 | 48 | 28.6 | 33 | 29.4 | 81 | 28.9 |
| 3 | 37 | 22.0 | 16 | 14.2 | 53 | 18.9 |
| 4 | 48 | 28.6 | 32 | 28.6 | 80 | 28.6 |
| 5 | 21 | 12.5 | 19 | 17.0 | 40 | 14.3 |
| 6 | 2 | 1.2 | 5 | 4.5 | 7 | 2.5 |
| 7 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Totals | 168 | 100.0 | 112 | 100.0 | 280 | 100.0 |

$\underline{X}^2 = 6.04$, $\underline{df} = 6$, not significant.

TABLE 6

LEVELS OF VOCATIONAL EXPECTATION OF STUDENTS IN SCHOOL E COMPARED WITH THOSE IN SCHOOL C: FREQUENCY DISTRIBUTIONS, PERCENTAGES, AND CHI SQUARE

| Expectation Level | School E | | School C | | Schools Combined | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| 1 | 9 | 5.4 | 1 | 0.9 | 10 | 3.6 |
| 2 | 40 | 23.8 | 14 | 12.4 | 54 | 19.3 |
| 3 | 31 | 18.5 | 9 | 8.0 | 40 | 14.2 |
| 4 | 53 | 31.6 | 25 | 22.3 | 78 | 27.8 |
| 5 | 30 | 17.8 | 33 | 29.6 | 63 | 22.5 |
| 6 | 5 | 2.9 | 29 | 25.9 | 34 | 12.2 |
| 7 | 0 | 0.0 | 1 | 0.9 | 1 | 0.4 |
| Totals | 168 | 100.0 | 112 | 100.0 | 280 | 100.0 |

Note.--In the Hamburger Revised Occupational Scale, used to assign students to vocational aspiration and expectation levels, the three highest occupational levels (Levels 1, 2, and 3) require post high school education ranging from 12+ years in the case of a psychiatrist, for example, to a minimum of two years in the case of some occupations in Level 3. Levels 4 and 5 customarily require post high school training of the type offered in special technical schools and on-the-job training, including apprenticeships. Occupations which fall in Levels 6 and 7 usually require little or no post high school training.

$\underline{X}^2 = 49.50$, $\underline{df} = 6$, significant at the .001 level.

The results (Table 5) show that most of these inner-city high school seniors (54.6%) aspired to vocational levels requiring two or more years of post high school education (sum of percentages of levels 1, 2, and 3 for the combined schools), and that the program of structured career related activities had no appreciable

effect on vocational aspirations. (It is interesting to note that an approximately equal number, 52.2%, of the combined school population indicated similar high level intentions by selecting to respond to the "School Full Time" section of the Vocational Planning submeasure of the V-ES.)

Table six shows that 47.7% of the seniors in School E expected to be at levels 1, 2, or 3 in fifteen years, while only 21.3 % of the seniors in School C had these vocational expectations. The significant difference in vocational expectations in favor of the experimental group appears to indicate that their exposure to the two-year program has appreciably increased their confidence that they will attain higher vocational goals.

## DISCUSSION

The findings of this investigation have indicated that a program which integrates vocationally related knowledge and activities into the total educational experience of inner-city youth can positively modify and influence maturity of vocational development irrespective of sexual or curricular group membership. The experimental group significantly exceeded the controls on all vocational maturity submeasures. They knew more about the world of work and about themselves. They took more actual steps toward post high school work or school goals. They participated in more activities in and out of school. They had more actual paid work experience and their on-the-job earnings were greater. They aspired to higher vocational goals and had a greater degree of confidence that these goals would be realized. They acquired higher grades in school. It would appear that these students have improved feelings of

self-worth and more positive attitudes toward their vocational futures as a result of their educational experiences. Both the Kerner Commission (1968) and Coleman (1966) Reports warn against the deadening affects of a lack of "destiny control." The results of the present study indicate that the Developmental Career Guidance Project in Detroit is making inroads against fatalism for the inner-city youth it serves.

Of particular relevance is the study finding that School E students in the curricular group labled "Other," that general category into which the least motivated and lowest achieving students tend to fall, attained higher VM ratings than the controls in the college preparatory curriculum. The general curriculum is less realistically related to post high school vocational steps and it is the students in this group who traditionally benefit less from their formal educational experiences. School C students in the "Other" category scored the lowest VMR's (mean = 287.36) of any group in the study; they had significantly lower mean scores (.001 level) than the other two curricular groups in the same school.

Historically the social and economic climate in American life has tended to create growth and development difficulties for Negro youth. The sense of powerlessness, resulting in psychological emasculation and alienation, has traditionally been more psychologically damaging to Negro boys than to Negro girls (Grier & Cobbs, 1968). While the high percentage of Negro youth in the study warranted the hypothesis that girls would attain higher vocational maturity ratings, the fact that the results do not substantiate

this thesis may be a hopeful sign.

Vocational choice and development theorists are generally absorbed with the question of why certain people tend to end up in certain occupations. It seems to the present investigator that the forces of change at work in our society, resulting from advanced technology, population shifts, higher standards of living, increased longevity and freedom from disease, to name only a few ingredients, tend to make this question virtually obsolete. It is predicated on the assumption that an occupational role or series of related roles provide a natural destiny for each individual. While career pattern studies of many typical workers by Miller and Form (1951) gave credence to this assumption and provided the basis for much of our present theory, the changing character of the world of work is making the assumption less tenable.

The proposition that there is a natural occupational destiny for each individual leads to the presupposition that the character of vocational guidance should be to help individuals find those occupational niches which are ideally suited for them. It tends to obscure the likelihood that most individuals can fill any one of an inestimable number of unrelated occupational roles and are only limited in doing so by exigencies of time, place, socio-economic circumstances, and the effects of environmental conditioning--including that which occurs in school.

Much of the research data upon which present vocational choice and development theories are founded has been derived from atypical samples, that section of the population which is achievement-oriented and has the wherewithal to more freely make decisions related to vocational directions.(Holland, 1964). Conclusions and findings

drawn from such data apply more accurately to the upper levels of that forty per cent of the population normally programmed for college (Pearson, 1967). The professional and semi-professional occupations, offering status, power, and high earnings, are entered through the avenue of college attendance. School personnel tend to reinforce the value of higher education goals while covertly conveying the message of low worth for those who cannot reach these levels. School guidance departments are customarily oriented and trained to provide more effective educational and vocational help to the abler student, who is seen as having a choice, while for the less able student, any job he can get will do. Thus, the majority of the school population are left to their own usually inadequate resouces.

Focusing on the concept of vocational maturity offers hope for increasing the effectiveness of vocational guidance and education for all youth. Relative maturity at any age, or in any area, is determined by behavioral norms. Normative data such as that provided by Piaget or Gesell enable the professional worker to determine maturity status and to plan for adjustment, remedial, or enrichment programs. The concept of reading readiness, somewhat analogous to vocational readiness, has spawned productive research resulting in normative data and the development of instruments useful for determing teaching practices in the primary grades.

What constitutes normative vocationally related development at stages prior to work or college has been widely discussed in vocational guidance literature by Super and others. These descrip-

tions of vocational development provide general guidelines, but the task of determining specific vocationally-related behaviors normative for all kinds of youth at each stage still confronts behavioral science researchers.

The present investigation attempted to determine particular vocationally-related behaviors common to second semester seniors in two inner-city high schools, to gather data about these behaviors, to analyze and evaluate these data, and to draw conclusions about the relative vocational maturity of individuals in the study population. Data were gathered in six vocational maturity component areas. School achievement, as measured by grade point averages at two grade levels, emerged as the best predictor of a rating of vocational maturity, but this was an expected result; it was doubly weighted in the instrument.

More promising for future vocational maturity researchers is the finding that the vocational planning and job knowledge sections of the research instrument together emerged as vocational maturity rating predictors almost as powerful as school achievement. This finding provides a basis for direction in the development of other vocational maturity rating instruments. The finding indicates that an assessment of students' vocational-educational plans or lack thereof, and steps taken toward plan implementation, together with an assessment of general job knowledge, would provide a vocational guidance worker with a relatively valid rating of an individual's vocational maturity. If those professionals who work with students had such normative data about the population they serve, they could more effectively help students to be ready for vocational decision-making.

## REFERENCES


CAMPBELL, D. T., & STANLEY, J. C. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand McNally, 1963.

CRITES, J. O. A model for the measurement of vocational maturity. Journal of Counseling Psychology, 1961, 8, 255-259.

CRITES, J. O. Research on vocational guidance: status and prospect; part II: proposals for a new criterion measure and improved research design. In H. Borow (Ed.), Man in a World at Work. Boston: Houghton Mifflin, 1964. Pp. 324-340.

GRIER, W. H., & COBBS, P. M. Black Rage. New York: Basic Books, 1968.

HALL, D. W. The Vocational Development Inventory: a measure of vocational maturity in adolescence. Personnel and Guidance Journal, 1963, 41, 771-775.

HAMBURGER, M. A. A Revised Occupational Scale for Rating Socio-Economic Class. Unpublished manuscript, Teachers College, Columbia University, 1957.

HOLLAND, J. L. Major programs of research on vocational behavior. In H. Borow (Ed.), Man in a World at Work. Boston: Houghton Mifflin, 1964. Pp. 259-284.

JOHNSON, P. O. Statistical Methods in Research. New York: Prentice Hall, 1949.

LEONARD, G. E. Developmental career guidance in action: the first year. Wayne State University, 1966. (Mimeo)

LEONARD, G. E. Career guidance for inner-city youth in action: developmental guidance project. Wayne State University, 1968. (Mimeo)

McNEMAR, Q. Psychological Statistics. New York: John Wiley and Sons, 1962.

MILLER, D. C., & FORM, W. H. Industrial Sociology. New York: Harper, 1951.

PEAK, H. Problems of objective observation. In L. Festinger and D. Katz (Eds.), Research Methods in the Behavioral Sciences. New York: Holt, 1953. Pp. 243-299.

PEARSON, R. Access to higher education: the implications for planning. In Preparing School Counselors in Educational Guidance. New York: College Entrance Examination Board, 1967. Pp. 7-15.

Report of the National Advisory Commission on Civil Disorders. New York: Bantam Books, 1968.

SUPER, D. E. The Psychology of Careers. New York: Harper, 1957.

SUPER, D. E., & OVERSTREET, P. L. The Vocational Maturity of Ninth-Grade Boys. New York: Teachers College, Columbia University, 1960.

SUPER, D. E., et al. Career Development: Self-Concept Theory: Essays in Vocational Development. New York: College Entrance Examination Board, 1963.

TIEDEMAN, D. V. Decision and vocational development: a paradigm and its implications. Personnel and Guidance Journal, 1961, 40, 15-21.

UNITED COMMUNITY SERVICES. Quintile Values of Subcommunities in Detroit. Detroit: 1962. (Based on 1960 Census figures.)

UNITED STATES DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE. J. S. Coleman, et al. Equality of Educational Opportunity. Washington, D. C.: United States Government Printing Office, 1966.

VRIEND, J. Career motives and drives of inner-city adolescents. élan: Journal of the College of Education, Eastern Michigan University, 1968, 1, 12-15.

VRIEND, J. The vocational maturity of seniors in two inner-city high schools. Unpublished doctoral dissertation, Wayne State University, 1968.